

ABSTRACT

Garbage is a major problem in everyday life. It has been found in all places that are often passed, lately has provided bins of different colors as a marker of disposal of three types of waste namely organic, inorganic and non-metallic inorganic waste. Organic waste is waste that can decompose, for example, dried leaves, kitchen waste, and everything that can rot and decompose. While inorganic waste is rubbish that cannot be decomposed due to waste components that cannot be penetrated by bacteria.

To solve this problem, an automated garbage bin system is implemented as an alternative that can be used for waste management to be more effective in order to increase efficiency and reduce waste as much as possible. The design of the waste selection building aims to sort out the types of waste, so that waste can be separated based on the type, both organic and inorganic waste can be processed. Sensors used in automatic bins are proximity sensors, proximity sensors are divided into two, namely proximity capacitive to detect inorganic, as well as inductive proximity to detect types of metal waste.

The results of the testing in this final project show that the success rate of detecting organic waste is 70%, while non-metal inorganic waste and metal waste have been successfully detected, and the system runs according to the scenario, namely, the android application can add data to the database and retrieve it. the data is according to the database, the tool can also detect the correct waste and if it is wrong the gate will not open and will not get points, and if you force the garbage correctly, the points will automatically be added to the application.

Keywords: Trash, proximity sensor, organic, inorganic nonmetal, metal.